DOCUMENT RESUME

ED 323 830 HE 023 801

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TITLE Knowing, Learning, and Writing: Patterns in Students' Understanding of Academic Work.
PUB DATE Jun 90
NOTE 21p.; Prepared for the Annual Institute on Writing Across the Curriculum, Minnesota Community Colleges (Brainard, MN, August 19-22, 1990).
PUB TYPE Information Analyses (070) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Students; *Developmental Stages; *Epistemology; Higher Education; *Intellectual Development; Intellectual Experience; *Learning Processes; Mental Rigidity; Student Attitudes; Teacher Attitudes; *Writing (Composition); *Writing Across the Curriculum; Writing Skills

ABSTRACT

The paper describes four major patterns that emerge in studies of college student intellectual development. Quotations from students' writing about their epistemological beliefs and quotations from professors' writing concerning their courses and students are related to the four patterns. Characteristics of student writing associated with each developmental pattern are presented along with illustrative examples. The four patterns are: (1) entering the academic world--dualism and received knowing (writing may focus on facts, and opinions may be fairly dogmatic); (2) multiplicity and subjective knowing (writing may express opinions without concern for persuasion); (3) relativism and procedural knowledge (writing may well provide a context for the reader, including opposing viewpoints, but often does not include a definite position on the subject); and (4) commitment in relativism and constructed knowing (writing is likely to be a mature blending of logic, empathy, and ethical concern that is neither moralistic nor simplistic). The document notes the relative rarity of the two more advanced positions among college undergraduates and the danger implicit in "commitment" assignments in encouraging premature solidification of student opinions. Includes 12 references. (DB)

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HE023801

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Knowing, Learning, and Writing:
Patterns in Students' Understanding of Academic Work

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June, 1990

Educators at the college level are often puzzled by students' responses to classroom practices, assignments, and teachers' criticisms of their work. One such educator is William G. Perry, Jr., now retired from Harvard University's counseling center. Perry noticed that students differed widely in their approaches to reading assignments. Some read every word, others were more selective. Some could not understand how professors or teaching assistants could "read in" so much to a passage of text. Some did poorly in their school work although they spent a great deal of time studying. Curious about these differences and hoping to find a way to help the less successful students, Perry and his associates began to interview students systematically about their school experiences. They followed two groups of students for four years, interviewing them once at the end of each year. The results of their studies were first published in 1970.

Perry found that students constructed explanations of the learning process and what they were supposed to be doing in it. The explanations they came up with as they progressed through college followed a definite pattern. Driving this evolution was the formulation and resolution of epistemological questions: questions about the nature of knowledge and truth, what it is to know, how one comes to know or believe anything, and how beliefs can be validated.

The first study was conducted at Harvard, and over 80% of participants were men. A decade and a half later, four women published a report of their work with women. Their study included both college and non-college women. Their book, Women's Ways of Knowing ("WWK"), reveals that epistemological thinking is equally prevalent in the minds of women, although their explanations and approaches to knowing differ somewhat, on the whole, from the patterns observed by Perry (Belenky, Clinchy, Goldberger, and Tarule, 1986).

Dozens of studies and even more theoretical and prescriptive papers have explored the epistemological framework first proposed by Perry in 1968. My doctoral work, completed in 1975, reports on a study of the ways students' epistemological beliefs vary depending on the subject they are thinking about. Other researchers have considered the way epistemological patterns relate to learning behaviors such as reading, writing, and critical thinking.

In this essay, I describe four major patterns that consistently emerge in studies of intellectual development. After summarizing each pattern, I quote students talking or writing about their epistemological beliefs. Then I quote from descriptions of students written by participants in last year's WAC program who responded to the assignment in Appendix A. Finally, I describe characteristics of student writing associated with each developmental pattern, and give brief illustrative examples.

These descriptions and illustrative quotations are, of course, highly selective. They

address only one facet of students' development and they gloss over an infinitude of individual differences. However, as you read them, you may find some similarities to qualities you have observed in your own students. It will be helpful later if you make note of these similarities.

1. Entering the Academic World: Dualism and Received Knowing

As academicians with highly developed knowledge of our subjects, we are fully aware of the complexity of knowledge. However, most students, particularly freshmen, do not share our vantage point. To them, "knowing" is a simple, cut-and-dried matter. "Knowledge" is facts, information, rules, procedures; to learn is to "acquire" such knowledge. Their experience in high school has often reinforced the idea that teachers have knowledge, which they dispense to students, who must accurately return it to the teacher in order to "make the grade." The more facts you possess, the smarter you are--at least in school. Paulo Freire has called this the "banking" model of education; the teacher deposits information in the students' minds, to be withdrawn by the student for later use.

Students who share this epistemological pattern mistake factual information for knowledge. They believe that facts exist independently and that they are absolute: either true or false, right or wrong. There are no "grey areas"; hence Perry's term, "dualism." Authorities are people who possess large quantities of information. The more degrees they have, the greater their knowledge, therefore, the greater their authority. Teachers and textbooks are reliable sources of knowledge, at least about school subjects. The best way to learn is to write down everything the teacher says in lecture and remember as much as possible of the information found in the text.

Belenky, et al., chose the term "received knowledge" to convey the passivity with which such students accept the authority of their teachers. Often these students have accepted many ideas about themselves from other authority figures such as parents. For example, many students have chosen a major field of study based on a parent's advice or a childhood fantasy in which they identified with a storybook or (more likely today) television character. Dualistic thinkers may not question such "choices" even in the face of strong evidence that they are on the wrong track (for example, poor grades in the major subject or unhappiness and lack of motivation to learn).

Students' beliefs about knowledge are reflected in the ways they study. Dualistic students read for facts, not concepts (Ryan, 1984b). They have trouble completing independently tasks that require abstract reasoning, extrapolation of ideas, interpretation, evaluation, or even application. The may prefer multiple choice examinations, and they will protest against "tricky" questions, i.e., those whose answers were not presented in text or lecture but which require "independent thinking."

Here is how students who think dualistically talk about knowledge:

"A certain amount of theory is good but it should not be dominant in a course. (raises

voice) I mean theory might be convenient for them, but it's nonetheless--the facts are what's there. And I think that should be, that should be the main thing. (Perry, p. 67)

"Good teachers should teach you to find the right answers, but also after you have tried to find them they should give you the right ones so you know if you have found them or not."

(On learning from peers): "I tend to trust more what a professor says than what a student says. I have more faith in the teacher, that what he says is correct and concise. Whereas the student might be giving her opinion; it might not be the right one. The teachers are always more or less right. (Why?) They have books to look at. Things that you look up in a book, you normally get the right answer. (WWK, p. 39)

Many participants in last year's WAC conference described student characteristics that are quite consistent with this developmental pattern. For example, a composition teacher writes about a research class:

"...The second fear is not selecting the right topic...Students have not yet realized that there is a process to this research business, that each step in the process has its own goals and considerations, and that one can return to any stage to revise or rethink. (emphasis added)

"It seems to me that students believe that there is only one correct way to research, that research ought to be done only once, and that it ought to be thorough and exhaustive. They are looking for a correct way instead of their correct way, and they are often disappointed when they have no guidelines by which to evaluate their success. If they are successful, they are not sure why." (K. Sutton)

A psychology professor (and several in other disciplines as well) describes his students this way:

"One theme that comes to mind is: Write things down, don't think about them. There is a tendency to copy information into notes for later memorization before a test. A second and related theme is: Memorize but don't analyze. There is a tendency to ingest information uncritically....Other impressions of mine include a sense that students are terribly uncomfortable dealing with theoretical and conceptual abstractions. In my experience they have done poorly when asked to apply or synthesize ideas. They complain that this type of assignment is hard. They complain about the amount of work, the difficulty of the text, but they say they enjoy the class and that it is valuable to them." (John Robertson, Hennepin)

In nutrition:

"Most of the students who enter this course have been taken in with the popular myths

and present fads regarding 'good nutrition,' and almost all have tried or fully participated in one of the popular diets on the market today. I believe they come seeking hard and fast rules and facts of nutrition for better health and weight loss or gain. They seem to come looking for absolutes. I believe they see me as the expert to simply give them the information they need. I also believe they see nutrition as good or bad with no gray areas. However upon examination most do in fact live within that gray area.... everyone seems to enjoy class sessions when controversies are discussed but I believe they see the times I present facts to be more important...." (Connie Stack)

And in music:

"Most of the students respond primarily on a passive and/or emotional level to the music they hear. Most share the common experience of rock music but also usually limit their listening to this genre and most have developed defensive attitudes (not surprisingly!) about "their" music. As a rule they are not readily receptive to new perspectives (viewing them with some mistrust and suspicion) and often see opinions and thoughts in terms of black and white. Because this class is generally small (usually numbering fewer than 25), almost all will participate and share in both small group and whole class discussions. However, they are most apt to offer specific pieces of information and/or facts and exhibit reticence about asking questions or offering opinions. Because this is not an English class, these students usually resist writing projects and must be convinced that writing has value in this discipline. Many of these students have some difficulty accepting the subjective elements used in the evaluating process...." (author unknown; emphasis added).

These descriptions closely parallel those of Perry and Belenky et al., although the students described come from educational institutions that differ significantly from those studied in prior research.

Writing Characteristics, Dualism and Received Knowledge Patterns

For students who reflect this pattern, information is the focus of writing just as it is the focus of reading and learning from lecture. Hence facts or ideas taken fairly directly from text or lecture may dominate their writing. Their primary organizing principle in writing is to group all the related facts together (Ryan, 1984a). Also, they do not distinguish very clearly between information and opinion; they may mistake their personal views for "truths" and dismiss all others as simply wrongheaded. So their writing takes on a dogmatic quality as they pronounce what is true for them as if it were fact. When they write about moral issues, their tone may become quite emotional and moralistic. They rely on personal experience and anecdote rather than more broadly applicable evidence. Their solutions to complex problems are usually simplistic, and they may scold or blame "evildoers" who do not see things their way or who behave in the manner of which they disapprove.

Here are some examples from a study in which students wrote about proposed regulations

to address the problem of drunk driving. They are writing to a "hostile" audience, in this case, members of the brewers' association.

> "Being members of Beverage Industries and Brewers Associations doesn't change the awareness of the above facts [about drunk driving accidents]. Selling alcoholic beverages is not the issue. Having people overindulge to the point of losing control of their driving abilities is the issue at hand. The local pubs, bars and home parties should be responsible for the actions of the individuals who frequent their business." (Hays, 1987)

Or a more extreme example:

> "Now of course you are against tough drunk driving laws, but that is only because you and your industries make the alcoholic beverages and people are buying them. You don't care how they abuse themselves or others with it, just as long as you make money from it." (Hays, 1987)

In a recent study of writing by students in the Human Services program at one of the Minnesota community colleges (Makar, 1989) a student responded to an article advocating community homes for the retarded with this short essay:

> "I believe the Author's position is to take all retarded citizens with the exception of the severely retarded, out of the institutions and put them into a family type style of living where they can go into the community and live, to maintain a job, be able to go shopping, and try to live independently. I can agree to this as I have seen what it is doing for the handicapped, I have also talked to some of them, and they say that they are much happier because they can do most anything they want. Some of them are even getting married and having children, even though they are told they aren't supposed to.
>
> "I can agree to the whole idea because just listening to these people talk which for some is hard to do, makes me feel like I'm floating on a cloud."

Although this writer acknowledges that retarded people are having children in spite of warnings, he does not pause to consider some of the problems this aspect of the proposal could create. In fact, none of the papers in the small sample I read, even those rated "acceptable" on the basis of the quality of the writing, addressed possible problems. Most showed a distinct bias in favor of the author's position on the subject, with no mitigating circumstances noted and no apparent consideration that the reader might disagree and have legitimate reasons for doing so. The last two examples show that these students may unintentionally stereotype people on the basis of their membership in a particular group. The author of the second statement addressing the Brewers' Association never pauses to consider that a member of that association might be just as concerned about the problem of drunk driving as the writer.

Teachers whose students' thinking is so starkly dichotomized have two major tasks: to help their students grant at least potential legitimacy to points of view other than their own, and

to help them distinguish between a person's affiliations and his or her characteristics, beliefs, values, and attitudes.

2. Multiplicity and Subjective Knowing

Perry found that as students encountered the pluralism of the Harvard environment, they were forced to relinquish the notion that all knowledge is cut and dried. The transition from certainty to uncertainty can be a painful one for many students. Here is how a premed student at Simon's Rock, an early college for adolescents aged 16-17, talks about dropping an introductory sociology course:

"I'm scared of social science courses. I haven't learned how to approach them.... Who's to say what is right and what isn't. Science is more exact." (Goldberger, 1981, p. 240)

In attempting to account for the ambiguities and uncertainties they encountered, the students in Perry's sample revised their view of knowledge. They continued to divide the world into two realms, but instead of "truth" and "falsity" their two realms now became "those areas where we have the facts" and "those areas where all the facts are not known," either because we have not done enough research or because they cannot be known. In the realm of "facts," truth and falsity are still clearly defined. In the sciences, we have "hard facts," i.e., clear, certain knowledge. But in that other realm, all we have is opinion. Subjects such as literature, art, music, psychology, and sociology frequently wind up in students' "opinion" category. In these subjects, since the "facts" are not known, one opinion is believed to be just as good as another. With no absolutes to appeal to, standards simply must not exist. These students often see truth and values as arbitrary, a matter of personal bias or whim. This perception can be exhilarating and overwhelming. For example, in a philosophy course taught by an self-confessed confrontive professor, a student vividly describes his transition into multiplicity:

> "Then one day I began to think that maybe I was wrong and the views I held on life were not the right ones. This is when I began to open my mind to the thoughts and attitudes of others. The result of listening to others had a multitude of effects on me. The most devastating was that of total confusion. Were my original beliefs, morals and values wrong all along or were those of others wrong? Maybe we were all wrong. If so, why were we wrong and who, if anybody, was right?" (Reinsmith, 1987, pp. 83-84)

The student retains the dualistic assumption that there IS an absolute right and wrong. Another student has more clearly crossed over the border into multiplicity, and suffers great anguish because of it:

> "My feelings are not what I hoped they would be when I contemplated this philosophical journey at the beginning. I am confused, angry and definitely spiritually unfulfilled. Of course, I didn't expect answers to miraculously appear before me, but I also didn't expect to feel as if I would be walking through endless miles of quicksand." (p. 84)

These responses remind us of what Perry refers to as the "costs of growth." Although

most courses do not have such a profound effect on students, these responses remind us that students may have good reason to fear the consequences of independent thinking.

Belenky et al. found that in the presence of conflicting voices, many women in their study listened to the self as a primary way of knowing. They appealed to their own intuitive sense of what is right rather than letting others impose "truth" upon them. For women, the transition from received knowing to subjective knowing was thus an affirmation of self. Nonetheless, they affirmed themselves rather diffidently. While men in Perry's studies asserted their opinions forcefully, women tended to be more reticent. Where men said, "I have a right to my opinion, women said, "It's just my opinion." Often, they turned to other women as well as their own inner voices. Women expressing the perspective of subjective knowing seemed to be rejecting their previous faith in "authorities" from whom they had once accepted knowledge and direction unquestioningly. As it happens, these authorities were usually male. These women expressed distrust of the "male" mode of logic, analysis, and abstraction. In part these attitudes reflect the realities of women whose lives had been dominated by men (fathers, spouses, boyfriends), in many cases abusive men. The researchers were surprised, in fact, to discover that a substantial segment of the women they interviewed had been subjected to some form of abuse (including incest).

An implication of both multiplicity and subjective knowing is that many inner, personal, subjective "truths" are possible. Thus to resolve different views of truth is impossible, and can only create needless conflict. Discussion may degenerate into a "bull session" in which opinions are traded but no real listening, development or exchange of views takes place. For women who have been subjected to male dominance or abuse, argument or even heated discussion may be difficult or frightening.

Here are the voices of students who reflect this pattern:

> (talking about why he prefers physics to philosophy): "I'd feel (laughs) rather insecure thinking about these philosophical things all the time and not coming up with any definite answers. And definite answers are, well, they, they're sort of my foundation point. Beyond that point you know there are definite answers, but you can't reach them." (Perry, 1970, p. 67; emphasis added)

This student clearly dichotomizes knowledge, then subdivides physics into realms of fact and uncertainty, signalling the shift from dualism to multiplicity.

Another student writes about how one would know whether or not it is a good idea to use competency testing to certify high school graduates:

> "It's just a matter of opinion. Whichever is best for that school, for those students. You'd have to ask the parents and the teachers what they think is best. You could take a vote and go with that. The authorities just have different opinions on the matter because of their different backgrounds. Maybe one had a bad experience with a test." (Mortensen,

unpublished data)

Another student, answers the question, "Is there a way to tell right from wrong?"

> "If it feels good to me, it's right to me. I don't think there is a procedure for determining what's right. There's no such thing as right or wrong." (Goldberger 1981 p. 236)

Note in these two quotes the emphasis on individual, subjective factors in decision making. These students are unfamiliar with the kinds of analysis that academics take for granted. To them, opinions, positions and theories are equally arbitrary and personal, and about the only way to resolve differences is to take a vote. Concepts such as sustained inquiry and reasoned dialogue appear to be absent from their cognitive repertoire. These concepts and the skills they entail must be learned, and the place where they are most likely to be learned is in college. Unfortunately, subjectivist thinking is rather persistent and has been reported even among college seniors (e.g., Welfel, 1982).

Minnesota Descriptions, Multiplicity and Subjective Knowledge

Since all opinions are equally valid to students who share this pattern, it is not uncommon for them to express opinions without concern for persuasion. Here a microeconomics professor reports that his

> "...most frequent criticism of students' written work is a failure to support each generalization with a specific example. This weakness is closely related to a more general sloppiness in expressing ideas, especially a tendency to write as many words as possible in a limited time instead of constructing coherent paragraphs." (Dan Millman, Itasca)

This is the kind of writing (or discussion) frequently referred to as "bull." For some students, absence of definite facts serves as license to hold just about any opinion they wish. The complement of bull is "cow." "Cow," is bull that is dense with facts but lacking any integrative point of view. "Cow" is likely to be the work of students who hold dualistic beliefs. (See Perry, 1977, for a delightful treatment of "bull" and "cow" in students' writing.)

A women's studies professor reported observing the kind of diffidence noticed by Belenky et al. in their studies of women's development. She commented that although her (predominately female) students were

> "quite good at putting down what they are feeling and thinking" when writing for reflection, they "at times are hesitant to share in a group. They tend to categorize or minimize their own thinking as 'silly,' 'uneducated,' or 'just me.'" (Bernice Grabber-Tintes, Willmar)

A professor who teaches nursing describes how subjectivity affects students' responses to the analytical methods of the course:

"There are a few students who are reluctant to analyze or utilize the nursing process, a problem solving method, since the only thing they judge their performance by is 'whether or not it feels right.'" (Delores Johnson Huanca, Normandale)

Another nursing professor emphasizes the importance of allowing students to explore their knowledge:

"...these small groups provide a comfortable climate for student discussions. They feel free to ask questions and to share with each other what they have learned and experienced in the clinical area."

This professor's description continues, pointing in the direction of development to the next perspective, described in section 3:

"It is in these discussions that students recognize and develop their ability to apply, analyze and synthesize information, and to utilize theory in a meaningful realistic sense." (author unknown, #12)

Writing Characteristics, Multiplicity and Subjective Knowledge

In their writing, students who fit this pattern may state an opinion and give a few facts, but they are not likely to attempt persuasion. When they receive low grades on essays written in response to open-ended questions, they are likely to attribute their failure to bias on the part of the instructor rather than the inadequacy of their presentation. When the topic is controversial, they will assume that a low grade means the instructor disagreed with their opinion, which is of course "unfair." Many a teacher has turned indignation about "unfair" grades on "opinion" papers into a "teachable moment." If the teacher can calm the student sufficiently to discuss the matter rationally, the student's work can be compared to that of more successful peers (preferably those who argued the same position as the student making the complaint) to illustrate what the student must do to succeed.

Here are a couple of examples of writing that displays the characteristics of this pattern.

This student is writing about a concert attended for a music class:

"My reaction toward the concert? I actually only enjoyed one or two small parts of the entire concert. I just wasn't motivated or excited by probably the type of music. I suppose if I listened to it enough it would sort of grow on me but right now it doesn't do a thing for me. A lot of the music really sounds the same.

Concluding his review, he writes:

"This is my review of my review of the concert. I figured I covered most parts pretty

well without dragging it out and making it boring. I could have said that it was an excellent concert and the conductor was super and try to butter you up, but I feel I don't know enough about this style of music to make such claims so I kept to my true feelings." (Herminio Diaz, Concert Guide examples, student A p. 4)

This writer recognizes that people differ in their responses to music, and he or she accepts these differences as quite natural. The writer is unfamiliar with the analytical tools that might provide a basis for a judgment of quality, making the wash of sound meaningful to a listener (and is aware of this), so he or she concludes that learning to like the music depends on passively getting used to the sounds rather than actively trying to understand the structure and context of the music. Notice too the implication that agreeing with the professor would win a more positive evaluation of the student's review, although this student resisted that temptation.

Another writer comments on brief message about "management" vs. "leadership," entitled "Let's Get Rid of Management":

> "You can tell how effective a message is by the response you get from people who read it. So far, every person I have showed this article to has found it to be as thought-provoking as I have.
>
> "Too many times our society gets hung up on words such as management and forgets the true theory behind the word. Thank goodness--not all of us forget!
>
> "I have put a copy of this article on the bulletin board where I work. It should be interesting to see how they react..." (WAC workshop materials, 1985)

This writer clearly recognizes--even relishes--differences of opinion. He or she is looking forward to the discussion provoked by the "article." But the writer fails to explain to the reader why he/she thinks the message is a good one. Nor does the writer offer any possible criticisms or limitations of the point of view presented by the author. He or she simply endorses it enthusiastically--and while the writer does not assume all readers will do the same, the primary persuasive strategy is the appeal to majority opinion in the first paragraph.

3. Relativism and Procedural Knowledge

When the academic world encourages students to share and explore the depths of their knowledge, insistently demands that students examine the basis of their beliefs, and requires them to use what they are learning to support their opinions, students gradually develop an understanding of how knowledge "works." If the courses they take emphasize multiple theories, or if they explore many subjects in depth, students begin to recognize that most subjects are complex, multifaceted, and replete with differences of opinion. They begin to recognize that facts must be understood within a context, that their importance or meaning depends on the questions being asked, which in turn depends upon the frameworks of the inquirer. They may recognize that knowledge requires active meaning-making on their part, and they begin to

incorporate procedures and skills for conceptual and critical thinking into their study and test-taking behavior. They recognize that while everyone is entitled to an opinion, some opinions, i.e., those with a sound basis in reasoning and evidence, are more "valid" (not "true" or "correct") than others. Perry calls this pattern of assumptions "relativism."

Both Perry and Belenky et al. find that at first students may see critical thinking processes (such as "presenting a balanced view of the subject") as a kind of academic game. With practice and guidance, they become genuinely independent, analytical and confident learners as their understanding of the learning process grows. Belenky et al. found that for many women, relativistic thinking began as a procedure to be followed. Professors introduced students to analytical processes which the women internalized and used to understand new works of art or literature, or new experimental data, or new philosophical ideas. Belenky et al. introduced the term "separate knowing" to describe this procedural approach to knowledge.

The procedures adopted by many women in the Belenky et al. study differed from those described by Perry in one important respect. Some of the women relied less on analysis and objectivity than on their ability to empathize with the object of their study. For example, they would try to understand the feeling conveyed by a poem or work of art, rather than approach it by analyzing its characteristics using established frameworks. In a discussion, they would try to understand another person's point of view before attempting to criticize it. Some women in the study believed that personal knowledge of a subject enhances rather than detracts from the ability to make judgments about it. Belenky et al. referred to this contrasting way of knowing as "connected" knowledge. They saw both separate and connected knowing as active and "procedural," and recognized strengths in both approaches. Not all of the women in their study were connected knowers; on the other hand, Perry did not report observing this form of knowing among the men he interviewed at Harvard.

Students whose comments reflect this pattern of thinking may use phrases such as "It depends on which way you're looking at it" (Perry, p. 102). Here is a woman speaking from the perspective of "connected" procedural knowing:

> "When I have an idea about something, and it differs from the way another person is thinking about it, I'll usually try to look at it from that person's point of view, see how they could say that, why they think that they're right, why it makes sense." (WWK, p. 100).

Here the student quite naturally accords respect to the perspective of the other. Unlike the subjective knower, however, this person assumes that it is possible to understand another's point of view. In contrast to this empathic entry into dialogue with one who differs, another student begins with a more argumentative, skeptical approach:

> "I never take anything someone says for granted. I just tend to see the contrary. I like playing devil's advocate, arguing the opposite of what somebody's saying, thinking of

exceptions to what the person has said, or thinking of a different train of logic." (WWK, p. 100)

This student's thinking exemplifies "separate" knowing. Separate knowing is the epistemological mode most often rewarded in higher education. It is associated with "objectivity," although in fact, like any mode of knowing, it presupposes a certain kind of relationship to the "other" who is the object of scrutiny, whether that "other" is a molecule, a poem, or a human being.

In all three of these examples, the writer seems to feel no obligation to take a position on the subject at hand. The object is to scrutinize, understand, analyze from more than one perspective. To come down on one side or the other, or to make a firm judgment on the subject, is more characteristic of students in the most advanced positions described by these researchers, commitment in relativism (Perry) and constructed knowing ((Belenky et al.). These patterns are taken up in section 4.

Minnesota Descriptions, Relativism and Procedural Knowledge

Among the 1988 WAC participants, a literature professor finds the relativistic pattern of thinking primarily among older students:

> "The older, nontraditional students who have been out of the classroom for some time are often able to discuss, analyze, and make good critical judgments in both their oral and written responses. They are the ones who may intimidate the newly graduate high school students at first, but who as the quarter progresses will also be the ones who challenge and encourage and set the pace for the rest of the class." (Ray Frisch, BCC)

In an introduction to microcomputers class, the professor observes that some students approach the subject confidently--and conceptually, characteristics that reflect this level's acceptance that to know a subject means working to understand it. He says,

> "The students who are eager to learn the material are generally interested in understanding the information rather than just memorizing facts. These students are receptive to discussions which present a conceptual framework. They feel confident that they will be able to learn the details and consequently are not preoccupied with them." (Tim Grebner, Lakewood; emphasis added)

In sharp contrast, the more dualistic students "are often reluctant to experiment with the computer for fear they may break it. They want to know which buttons to press rather than why they are pressing them." Coaxing students away from the security of rote learning is a major challenge for educators at every level, for even generally confident learners find themselves apprehensive beginners in one subject or another. And in fact many participants in the 1988 WAC conference reported that as students completed their courses, they showed greater conceptual and analytical thinking about the subject.

Writing Characteristics, Relativism and Procedural Knowledge

We recognize relativistic thinking when the writer provides a context for the reader, rather than assuming the reader knows what he or she has in mind. Writers operating from this perspective on knowledge recognize that people may differ for legitimate reasons. They let the reader know that they understand how the reader might perceive the situation, for example by sympathetically portraying opposing points of view on a controversial topic. These students anticipate the objections that readers might raise to their ideas, and so they develop their ideas more extensively to offset possible objections and draw the reader into agreement with them. Their writing becomes more complex and interesting, often reflected in longer essays, journal entries, etc.

What these students may not do easily is to take a definite position on the subject. They may be so persuaded by the arguments on both sides that they are unable to decide which idea to accept. As an undergraduate I wrote a paper on extraterrestrial life. I presented the pros and cons of the subject as carefully as I could. As I neared the end of my report, I realized that in the conclusion I should probably say whether or not I believed extraterrestrial life exists. Pondering this challenge for a moment, I concluded that when I got to the end I would think of something; most important was that I had presented the evidence on both sides, so the teacher could not accuse me of being "biased." I then shrugged and continued to write. It did not seem to me that I was responsible for anything more than presenting a "balanced view." (I think the paper received a B+ --to get an A, one had to take a stand, I suppose.)

Writers in this pattern are beginning to integrate facts ("cow") and opinions ("bull"). Their fascination with the process of giving reasons for those once-subjective opinions may render them maddeningly attached to phrases such as "It depends" and "on the one hand...on the other hand." In his examples, Matt Coulter refers to the "'both statements have some truth' type of answer' which most of us have seen at some time.

Commitment in Relativism and Constructed Knowing

It may be possible to get through school without having to take a definite position on anything. But to live and to act in the world outside the classroom, most people find they eventually must make choices. What distinguishes the choices of this pattern from those of students in dualism and received knowing is that these choices are preceded by a period of self-examination and serious exploration of the subject or situation at hand. (Perry describes an "alternative to growth" that he calls "temporizing" in which self-examination becomes an obsession so that commitment is forestalled indefinitely.) Commitment calls upon us to integrate knowledge and values, resulting in a chosen perspective or a preferred way of understanding the world that governs and lends unity to our lives. How this comes about is probably one of the greatest mysteries of adult development. But students are often quite aware of the challenges that face them once they understand that knowledge is relative, and that there are no easy answers. Here is how they talk about making a commitment:

"When you're looking at an issue that's important in life, you should compare the ideas that are given about the subject and it can only help you if you will look at both sides [note the lingering dualism here], but you should, when the time comes, take a certain stand on which way you are going to go -- either this way or that way...Basically, it's being able to look at all the ideas and from the ideas take a certain stand."

This student describes commitment procedurally, as if from a distance. His statement reflects a transition period Perry refers to as "commitment foreseen."

Here is a student who is more aware of how problematic commitment can be:

"Even after studying and examining all facets of an aspect of knowledge, a person cannot come up with an explanation that is the absolute truth. Because no knowledge can be termed as actual truth, a person must make a decision to internalize one point of view. He must stand behind this point of view until he runs across an explanation of another point of view which seems to be more logical or truthful to him."

Because this student has wrestled with the ambiguities and uncertainties of knowledge, he or she is far more apt to respect the point of view of people who hold different opinions. The student sees that knowledge is constructed and that how we understand a situation can change. The individual's responsibility to choose a point of view and to construct knowledge is also clearly evident in this brief excerpt.

From this perspective, even the sanctity of scientific knowledge can be questioned. Belenky et al. quote a senior honors student illustrating the perspective of constructed knowledge:

"In science you don't really want to say that something's true. You realize that you're dealing with a model. Our models are always simpler than the real world. The real world is more complex than anything we can create. We're simplifying everything so that we can work with it, but the thing is really more complex. When you try to describe things, you're leaving the truth because you're oversimplifying." (WWK, p. 138)

Minnesota Descriptions, Commitment in Relativism and Constructed Knowledge

Describing the writing done by several students in the 10th week of his US History course, Matt Coulter reports that his students have learned to take a position and defend it with evidence. For example, describing student 4's response to two contradictory quotes about Lyndon B. Johnson's involvement in the Viet Nam war, he writes:

"...the student confronts the question directly and takes a position. She shows thinking on the motivations for LBJ's actions. LBJ was 'ambitious' and wished to 'win a war.' She has supported her position with a variety of explanations."

Without extensive information about this student, we cannot make a definitive statement

about her "developmental level." Her ability to take a position and defend it may have been limited to the subject of the course. She was unable to do it at the beginning of the term; by the end her knowledge of the subject and her experience with this type of writing enabled her to handle the now-familiar, brief writing assignment quite successfully. This does not mean, however, that she thinks in this way about all her school subjects or about the nature of knowledge in general. We simply do not know. She may have been a relativist thinker in other areas of her life, and as her knowledge of history grew, she drew it into her existing framework for argument. On the other hand, that framework may have just begun to develop in this course. At least we can see that she has learned to express and defend a position within the intellectual realm of this course.

Matt Coulter's course is deliberately designed to help students learn to do this kind of thinking. Perhaps if all her courses asked her to develop her ideas and support them, the depth and breadth of her intellectual maturity might be considerably enhanced.

Writing Characteristics, Commitment in Relativism

Writing composed by students at this level is likely to be a pleasure for teachers to read--because these students are beginning to "think like their teachers"! Here is a writing sample from Janice Hays' "drunk driving" study:

> "The consideration of tougher laws on drunk driving presently underway in the Colorado State legislature presents a unique opportunity for those of us whose very livelihood depends on the sale of alcoholic beverages. This controversy presents us with a choice. We can lobby strongly against the tougher laws or we can come out in support of them. If a lobby in opposition of the laws succeeds, what will be our gain? Sales of alcoholic beverages will probably remain nearly stable while our public image may have suffered greatly. Strong support of these laws may result in a temporary drop in beverage sales which, if it occurred, would be short in duration. Our public image however would be greatly enhanced. I propose that in this situation it is distinctly to our advantage to avoid being labeled 'the big money industry bad buys who bought off the state legislature' and instead to cultivate the benefits which would result from our support of these laws..." (Hays, 1987)

The writing here is more complex than anything we have seen so far. Although the writer does not completely address the objections of his or her opponents, he or she does choose a role that enables him or her to establish a clear relationship with the audience. And the writer appeals to the audience by pointing out how supporting the laws will help them rather than by trying to make them feel guilty or ashamed of their occupation. The writer is skilful in the use of language, through which the writer conveys an empathetic, analytical way of thinking that guides the plan of the essay. In this respect the writer illustrates constructed knowing--a blend of logic, empathy, and ethical concern that is neither moralistic nor simplistic. When our students begin to produce writing of this quality, we see the benefits of our insistence that writing is a natural and necessary part of learning in any subject.

Conclusion

The more advanced positions and perspectives described here are not very common among college undergraduates. Graduate students are more likely to express committed relativist and constructivist views of knowledge in general. Nonetheless, it may be possible to help students make choices within the limited realm of a course. Many assignments require students to take and defend a position; the important aspect from a developmental perspective is that the assignment invite exploration of the topic as well as commitment to a position.

The danger of using "commitment" assignments before students have wrestled with the complexities of a subject is that students will solidify their positions before they have explored the questions and implications implicit in the issue. Premature commitment in the realm of identity development has been labeled "foreclosure" by Erik Erikson. In the intellectual realm, it may take the form of authoritarianism. Students need time to work within the framework of multiplicity and subjective knowing, and time to develop their analytical skills, as part of the process of moving toward commitment. Teachers can help students grow intellectually by designing developmentally sequenced writing assignments and class activities, and by providing support commensurate with the intellectual challenges posed implicit in the work of the course. A simplified summary of key challenges and supports at each level is provided in Appendix B. Many of the approaches developed in connection with Writing-Across-the-Curriculum programs offer effective means of attaining a helpful balance of challenge and support. The developmental models described here provide a conceptual framework that can enhance the effectiveness of these approaches.

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APPENDIX A

Preconference Writing Assignment
WAC 1989

The Situation:

You are writing to a colleague who will be teaching one of your courses during the 1989-90 academic year while you are away on a sabbatical. You want this person to succeed because the course is a very important one for students; also, your department chair was reluctant to let you have a sabbatical and you persuaded her partly on the grounds that you were certain your replacement would do an excellent job in this course.

Advise this person candidly as a trusted colleague, addressing each of the six dimensions listed below. Write a paragraph or so about each dimension, using the questions as a guide. Feel free to illustrate any of your remarks with anecdotes or examples.

1. Course goals and objectives:

What outcomes do you hope your course will acccomplish? That is, what do you most want students to know and to be able to do as a result of completing your course? Briefly describe a culminating task in the course to illustrate what you want students to accomplish.

2. Course methods:

What do you do to help students accomplish these goals? Describe any instructional strategy that you use to improve students' chances of success in the course (for example, sequencing of topics or assignments, classroom activities, conferencing, etc.)

3. Student expectations and characteristics:

What ideas about the subject do students bring to the course? How do they expect to learn in the course? What are their perceptions of their tasks and responsibilities and yours?

4. Students' responses to the course:

What do your students do well and seem to enjoy in your course? What aspect of the course do they most often complain about (if any)? What do you most frequently criticize about their work? What do you find most satisfying about their response to the course?

5. Your frustrations:

What are your greatest frustrations in teaching this course to these students? Is there a way writing could be used to address that problem?

6. Teacher characteristics:

What words do you want your students to use when they characterize you as a teacher? Choose 5-6 words that describe how you hope you are perceived by your students.

Appendix B
Fostering Transition

View of Knowledge	Primary Transition Issue	Supports for Transition
Received Knowledge, Dualism: One truth, known to all; it's "natural" to think this way. No valid alternatives No uncertainty. Authorities have The Answers.	**Transition 1:** Introduce idea of legitimate pluralism and uncertainty among Authorities.	Show empathy for dislocation caused by loss of truth, certainty. Establish boundaries, provide guidance, be fair, reliable Authority.
Subjective Knowledge, Multiplicity: Some truth, some uncertainty Authorities don't always know all; opinion often divided among alternative views. No analytical tools to compare, contrast alternatives so all equally valid.	**Transition 2:** Make analytical processes, tools, and evaluation criteria explicit. Introduce idea of "argument": claims supported by reasoning and evidence.	Give structured practice and feedback in use of tools, analytical processes of the discipline. Let students rehearse, help each other.
Procedural Knowledge, Relativism: Most things complex, uncertain. Can use analytical tools to compare, contrast, and evaluate competing perspectives. No basis for choosing among equally compelling alternatives.	**Transition 3:** Introduce values as basis for choice among competing alternatives.	Reveal own and others' dilemmas, both current and resolved. Discuss resolution of dilemmas; model courage in choosing and respect for those whose views differ.
Constructed Knowledge, Commitment in Relativism: Values provide criteria for commitment once analysis has exposed the issues. Commitments, once made, affect others, generate new questions and choices.	**Continuing Issues:** Clarify, renew, revise values. Find courage to commit and act. Realize self-examination is a lifetime process. Continued self- assessment without paralysis.	Companionship of others in a community of inquiry that values questioning, analysis of issues, exploration of values, and thoughtful action.